

Remarks

Claims 13-19 are pending in the application, and stand rejected.
Favorable reconsideration is respectfully requested.

Note is taken of the Examiner's comments concerning priority. However, their significance is not understood. The present application does contain a proper priority claim. The claim was submitted by way of preliminary amendment with the filing of the application on August 27, 2003. As proof thereof, a copy of the preliminary amendment, the transmittal form noting submission of the preliminary amendment with the application, and of a PTO-stamped postcard registering receipt of these materials on August 27, 2003 is submitted herewith.

Objections to the Drawings

The drawings were objected to as not showing every feature recited in the claims.

Concerning claim 13, the Applicant respectfully disagrees with the Examiner's remarks. FIG. 3 shows that a PCB 4 may include a plurality of ground planes 14. FIG. 5 shows a PCB 4 "with cuts made to a ground plane" (see the present specification, page 7, last paragraph) and including traces 2. Accordingly, the Applicant respectfully submits that the drawings do show the elements recited in claim 13.

Concerning claim 19, the objected-to language has been amended. With regard to the language of claim 19 as amended, the Applicant again observes the FIG. 3 shows a plurality of ground planes 14 as layers of a PCB 4. Such a plurality of ground planes, each including cuts as shown in FIG. 5, would supply the structure needed to meet the description "a plurality of said cuts are similarly located in respective ground plane layers of said printed circuit board."

As to claim 17, the objected-to language has been amended to replace "zipper cut" with "non-continuous".

In view of the foregoing, withdrawal of the objection to the drawings is respectfully requested.

Claim rejections

The claims were rejected "under 35 USC 102(e) as being anticipated by Pankinaho (U.S. Patent No. 6,140,966) as taught by Bräckelmann et al. (German Patent No. 2444228)."

In the above, the Examiner appears to be confusing anticipation with obviousness. To anticipate a claim under § 102, a *single* prior art reference must identically disclose each and every claim element. See Lindeman Maschinenfabrik v. American Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

In any event, the Applicant respectfully submits that neither Pankinaho (hereafter, "'966") nor Bräckelmann et al. (hereafter, "'228") renders the claimed invention unpatentable, for at least the reason that neither discloses or suggests "a signal trace line to carry a signal; a ground plane to connect said signal trace line to a ground; a cut in said ground plane to increase the transit time of said signal through said ground plane to decrease resonance in a printed circuit board."

The Examiner alleges that the radiating element 100 of '966 is equivalent to the claimed signal trace. The Applicant respectfully disagrees. As seen in Figs. 1, 2 and 7 of '996, for example, the radiating element 100 has a flat, planar structure including "holes," "slots," "lips," "strips" and the like. A trace, by contrast, is essentially a wire. Because of its different structure, the electrical behavior of the radiating element 100 would be different from that of the trace.

Thus, further, the notch 141 of '966 is not, contrary to the Examiner's allegation, equivalent to the claimed cut in the ground plane. That is, because the electrical behavior of the radiating element of '966 is different from that of the claimed signal trace, the notch of '966 cannot stand in an equivalent relationship

to the radiating element '966 as does the claimed cut in the ground plane to the claimed signal trace.

Accordingly, the '966 reference fails to anticipate claim 13 under section 102 or render claim 13 obvious under section 103.

The '228 reference also clearly fails to anticipate claim 13 or render claim 13 obvious. Specifically, it is noted that claim 13 recites "a cut in said ground plane to increase the transit time of said signal through said ground plane to decrease resonance in a printed circuit board." The '228 reference is silent at least as to increasing transit time of a signal and decreasing resonance in a printed circuit board. Instead, the '228 reference is directed to a method for increasing a characteristic impedance of a line or matching the characteristic impedance of a line to other lines by forming openings in a ground plane. See the Abstract. Specifically, in order to increase the characteristic impedance of an inductor L, a potential plane P is provided with openings O directly beneath the inductor L. See Fig. 1. The openings decrease the line capacitance and increase the line inductance, and result in an increase in impedance. The '228 reference makes no mention of reducing resonance or increasing the signal transit time in either the conductor L or the potential plane P.

In view of the foregoing, claim 13 is allowable over '966 and '228. Moreover, since they include the recitations of claim 13 by dependence thereon, claims 15-17 are likewise allowable over '966 and '228 for at least the reasons discussed in connection with claim 13. Withdrawal of the rejection of claims 13 and 15-17 is therefore respectfully requested.

Claim Objections

Claims 14, 18 and 19 were objected to, but were indicated to be allowable if rewritten in independent form. Accordingly, claims 14, 18 and 19 have been so rewritten and are accordingly allowable. Withdrawal of the objection to claims 14, 18 and 19 is therefore respectfully requested.

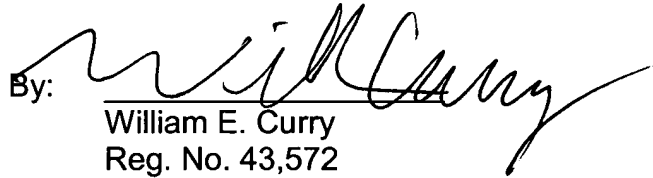
Conclusion

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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